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10/579,932	05/19/2006	Rifat Ata Mustafa Hikmet	NL 031366	3704

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EXAMINER

CHAPEL, DEREK S

ART UNIT	PAPER NUMBER
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2872

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/579,932	Applicant(s) HIKMET ET AL.	
	Examiner Derek S. Chapel	Art Unit 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☒ Claim(s) 1-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 May 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "3" has been used to designate both the person and the image. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to because figure two has two reference characters that are 2's. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the

immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the display device comprising a partial display emitting non-polarized light having at the emitting side a $\frac{1}{2} \lambda$ foil, λ having a value of 500 – 600 nm must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet,

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and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The disclosure is objected to because of the following informalities:
- a. the specification contains no headings;
 - b. "In order to compensate for the elliptically it extra retarders can be used with a negative birefringence within the system" on lines 17 and 18 of page 5 of the specification makes no sense;
 - c. "haveg" should be changed to --have-- on line 20 of page 5 of the specification.

Appropriate correction is required.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in

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upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

6. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: claim 7 claims a display device comprising a partial display emitting non-polarized light having at the emitting side a $\frac{1}{2} \lambda$ foil, λ having a value of 500 – 600 nm, but no support is given in the specification.

Claim Objections

7. Claim 1 recites the limitation "the mirror" in the second line. There is insufficient antecedent basis for this limitation in the claim. For the purpose of this examination "the

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mirror” will be interpreted to be --the polarizing mirror--. Claims 2-10 are objected to for inheriting the same informalities through their dependency from claim 1.

8. Claims 2-10 are objected to because of the following informalities:

- a. “non viewing” should be changed to --non-viewing-- in the first line of claims 2 and 3;
- b. “A polarizing mirror” should be changed to --The polarizing mirror-- at the beginning of claims 2-10;
- c. “a switchable polarizer” should be changed to --the switchable polarizer-- on the second lines of claims 2 and 3 since “a switchable polarizer” makes it seem as if there is the mirror and two additional switchable polarizers;
- d. claim 4 should end in a period;
- e. “band width” should be changed to --bandwidth-- on the first line of claim

9.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Faris et al., International Publication Number WO 98/38547 (hereafter Faris).

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11. As to claim 1, Faris teaches a polarizing mirror for viewing purposes (see page 7, line 25 through page 11, line 17) having a first plane reflecting light of a first kind of polarization to a viewing side (see figures 1A and 1B, figures 10, 10A-10F, elements 22A and λ LHCP, figures 14, 14A-14H, elements 28A and λ LHCP, page 34, line 21 through page 35, line 12, page 54, lines 4 through page 59, line 22, and pages 63-65), the polarizing mirror passing light of a second kind of polarization (see figures 1A and 1B, figures 10, 10A-10F, elements 22A and λ RHCP, figures 14, 14A-14H, elements 28A and λ RHCP) and being provided with a display device at its non-viewing side (see the λ LHCP and λ RHCP light incident on element 22B from the bottom in figures 10E and 10F and the λ LHCP and λ RHCP light incident on element 28B from the bottom in figures 14E and 14G as well as page 91, line 25 through page 92, line 8), which display device during use provides light of the second kind of polarization (see the λ RHCP light incident on element 22B from the bottom in figures 10E and 10F and the λ RHCP light incident on element 28B from the bottom in figures 14E and 14G), the polarizing mirror being switchable between a state passing light of the second kind of polarization and reflecting light of the first kind of polarization (see figure 10F, element 22A and figure 14A, element 28A) and a state passing light of both kinds of polarization (see figure 10E, element 22A and figure 14C, element 28A) the polarizing mirror having at the non viewing side between the display device and the polarizing mirror a switchable polarizer (see figures 10, 10A-10F, element 22B and figures 14, 14A-14H, element 28B).

12. As to claim 2, Faris teaches the combination of claim 1, having at the non-viewing side between the display device and the polarizing mirror a switchable polarizer

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being switchable between a state passing light of the first kind of polarization and reflecting light of the second kind of polarization (see figure 14E, elements 28B, λ RHCP and λ LHCP) and a state passing light of both kinds of polarization (see figure 14G, elements 28B, λ RHCP and λ LHCP).

13. As to claim 3, Faris teaches the combination of claim 1, having at the non-viewing side between the display device and the polarizing mirror a switchable polarizer being switchable between a state passing light of the second kind of polarization and reflecting light of the first kind of polarization (see figure 10E, elements 22B, λ RHCP and λ LHCP) and a state passing light of both kinds of polarization (see figure 10F, elements 22B, λ RHCP and λ LHCP), a retarding layer being provided between the polarizing mirror and the switchable polarizer changing the kind of polarization from the first kind of polarization into the second kind of polarization or vice versa (see figures 10E and 10F, element 21).

14. As to claim 4, Faris teaches the combination of claim 3, wherein the retarding layer comprises a $\frac{1}{2} \lambda$ foil, λ having a value of 500 – 600 nm (see figures 2E1-2E3, 10 and 10A-10F, element 21, figures 11A1 and 11A2, pages 21 and 22 and page 34, line 25 through page 35 line 12; it is noted that the CLC material making up the center of the retarding layer can convert polarization states from linear-to-linear and circular-to-circular which, by definition, is acting as a $\frac{1}{2} \lambda$ plate).

15. As to claim 5, Faris teaches the combination of claim 1, the polarizing mirror and switchable polarizers being cholesteric polarizers (see figures 10, 10A-10F, elements

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22A and 22B, figures 14, 14A-14H, elements 28A and 28B, page 34, line 21 through page 35, line 12, page 54, lines 4 through page 59, line 22, and pages 63-65).

16. As to claim 6, Faris teaches the combination of claim 5, the display device comprising a partial display emitting polarized light having at the emitting side a $\frac{1}{4} \lambda$ foil, λ having a value of 500 – 600 nm (see figures 2E1-2E3, 10 and 10A-10F, element 22B, figures 11A1 and 11A2, pages 21 and 22 and page 34, line 25 through page 35 line 12; it is noted that element 22B could be considered a $\frac{1}{4} \lambda$ foil at the emitting side of the display device since it is at the emitting side of the display device, the CLC material making up element 22B can convert polarization states from linear-to-circular and circular-to-linear which, by definition, is acting as a $\frac{1}{4} \lambda$ plate, and all of the light passing through element 22B in figure 10E is λ RHCP).

17. As to claim 7, Faris teaches the combination of claim 5, the display device comprising a partial display emitting non-polarized light having at the emitting side a $\frac{1}{2} \lambda$ foil, λ having a value of 500 – 600 nm (see figures 2E1-2E3, 10 and 10A-10F, element 22B, figures 11A1 and 11A2, pages 21 and 22 and page 34, line 25 through page 35 line 12; it is noted that element 22B could be considered a $\frac{1}{2} \lambda$ foil at the emitting side of the display device since it is at the emitting side of the display device, the CLC material making up element 22B can convert polarization states from linear-to-linear and circular-to-circular which, by definition, is acting as a $\frac{1}{2} \lambda$ plate, and all of the light passing through element 22B in figure 10F is both λ RHCP and λ LHCP which is non-polarized light).

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18. As to claim 8, Faris teaches the combination of claim 4, the retarding layer having a double layer comprising a retarder with a negative birefringence (see figures 2E1-2E3 and pages 34-35 and 39-41).

19. As to claim 9, Faris teaches the combination of claim 1, having a bandwidth of at least 50nm (see figures 11A1 and 11A2, pages 21 and 22).

20. As to claim 10, Faris teaches the combination of claim 1, reflecting in the visible range of the spectrum (see figures 11A1 and 11A2, pages 21 and 22 and page 34, line 21 through page 35, line 12, page 54, lines 4 through page 59, line 22, and pages 63-65).

Conclusion

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derek S. Chapel whose telephone number is 571-272-8042. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on 571-272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Derek Chapel

DSC

2/21/2007

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PRIMARY PATENT EXAMINER